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Question Paper Code : 11833

B.E./B.Tech. DEGREE EXAMINATIONS, APRIL/MAY 2026.

Seventh/Ninth Semester

Civil Engineering

OCH353 — ENERGY TECHNOLOGY

(Common to : Aeronautical Engineering/Aerospace Engineering/Automobile Engineering/Biomedical Engineering/Computer Science and Design/Computer Science and Engineering/Computer Science and Engineering (Artificial Intelligence and Machine Learning)/Computer Science and Engineering (Cyber Security)/Computer and Communication Engineering/Electrical and Electronics Engineering/Electronics and Communication Engineering/Electronics and Instrumentation Engineering/Electronics and Telecommunication Engineering/Environmental Engineering/Geoinformatics Engineering/Industrial Engineering/Industrial Engineering and Management/Instrumentation and Control Engineering/Manufacturing Engineering/Marine Engineering/Materials Science and Engineering/Mechanical Engineering/Mechanical Engineering (Sandwich)/Mechanical and Automation Engineering/Mechatronics Engineering/Medical Electronics/Petrochemical Engineering/Production Engineering/Robotics and Automation/Safety and Fire Engineering/Agricultural Engineering/Artificial Intelligence and Data Science/Bio Technology/Biotechnology and Biochemical Engineering/Computer Science and Business Systems/Fashion Technology/Food Technology/Handloom and Textile Technology/Information Technology/Petrochemical Technology/Petroleum Engineering/Pharmaceutical Technology/Plastic Technology/Textile Chemistry/Textile Technology)

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is meant by renewable and non renewable energy sources?
2. Why does India show more interest towards electric vehicles in the recent days than petrol or diesel vehicles?
3. List the limitations of conventional energy sources.

4. What is combustion process and give an example?
5. Distinguish between active and passive solar energy systems.
6. How is energy produced from ocean waves?
7. List the different types of biomass that are used as fuel.
8. Differentiate between biomass and biogas.
9. List the different ways to conserve energy at home.
10. What is energy tax and how it is used to conserve energy?

PART B — (5 × 13 = 65 marks)

11. (a) Write a short note on the present conventional energy scenario and sustainable energy scenario of India.
Or
(b) Give a detailed account on the classification of various energy forms and their possible alternatives.
12. (a) List and explain the different types of fuels used for steam generation in thermal power plants.
Or
(b) With a neat sketch explain the layout and working of a diesel engine power plant.
13. (a) Explain the working of a non convective solar pond and explicate how it is used as solar energy storage system.
Or
(b) Describe hot dry rock system of geothermal energy with a representation layout.
14. (a) What are the advantages of using biomass as an energy source? Also list the main sources of Biomass.
Or
(b) Explain the working of a fixed dome type biogas plant with neat sketch.

15. (a) What is energy conservation and explain the various ways of conserving energy in an industry.

Or

- (b) What is an energy audit? Explain various methodologies of energy auditing.

PART C — (1 × 15 = 15 marks)

16. (a) Draw a typical layout of a hydro power plant and explain the power generation from it.

Or

- (b) With neat sketches, discuss the various types of wind mills in detail.
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